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ABSTRACT

This report describes the 2-year cooperative education demonstration project conducted in three colleges of the San Mateo Junior College District (California). The project, involving all academic disciplines, offers co-op students three plans: (1) alternate class attendance and a full-time job in conjunction with another student on a semester basis (alternate semester plan); (2) a part-time job in conjunction with appropriate college class loads (parallel plan); or (3) a full-time job in conjunction with reduced evening college class loads (extended-day/evening college plan). The advantages found by students in the program include a new feeling of community involvement, a greater sense of relevance of the college experience to career goals, and a high degree of financial security permitting regular college attendance. The two benefits most often cited by employers participating in the program are the opportunity to recruit young, college-trained employees, and the ability to get full-time coverage of work assignments. It should be noted that, while this field-experience credit does not substitute for the general education requirements of the college programs, participation does provide depth and enrichment experiences for the major field of study. [Because of marginal reproducibility of original, this document is not available in hard copy.] (JO)

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COOPERATIVE EDUCATION IN THE

SAN MATEO JUNIOR COLLEGE DISTRICT

COLLEGE OF SAN MATEO * CAÑADA COLLEGE * SKYLINE COLLEGE

A Two Year Demonstration Project in
Community College Cooperative Education

JC 700 178

UNIVERSITY OF CALIF.
LOS ANGELES

AUG 10 1970

CLEARINGHOUSE FOR
JUNIOR COLLEGE
INFORMATION

Submitted to the Ford Foundation
on completion of the Project
September 19, 1969.

Robert L. Bennett

Dr. Robert L. Bennett
Assistant to the Chancellor/Supt.
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COMMUNITY COLLEGE COOPERATIVE EDUCATION

Cooperative Education--the plan for higher education which directly involves students in community work experience--is ideally suited to a large proportion of community college students.

This report of a two-year demonstration project in the three colleges of the San Mateo Junior College District is arranged to show that: (1) a successful demonstration and implementation has been completed in these colleges; (2) statewide changes have resulted which will allow development of similar programs on a large scale; and (3) related programs using the cooperative education concept are being developed.

The next step which is recommended as a result of this demonstration is the establishment of a consortium of community colleges to implement the program on a large scale. A training program within the consortium design should serve to train coordinators and program supervisors from other community colleges and provide information for visitors wishing to develop similar programs.

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This report is accompanied by two other publications

Cooperative Education Handbook

Vocational Cooperative Education:
A Proposed Five College Consortium

COMMUNITY COLLEGE COOPERATIVE EDUCATION: RESULTS OF A TWO YEAR DEMONSTRATION PROGRAM AT COLLEGE OF SAN MATEO, CAÑADA COLLEGE AND SKYLINE COLLEGE IN SAN MATEO COUNTY, CALIFORNIA

* New California legislation (SB 672, Alquist) which will provide state financial support for cooperative education programs in community colleges was signed into law in August, 1969. This legislation resulted from efforts of the CJCA-CROOTS Committee with support from the Board of Governors and Chancellor's office of the California Community Colleges. The San Mateo plan served as a discussion model in appearances before legislative committees.

* An extensive Cooperative Education program involving all academic disciplines has been developed in three colleges. The San Mateo plan with choice of alternate semester, parallel and evening college new career options has served as a model for development of a more comprehensive statewide program for California.

* For large community colleges using an optional choice arrangement for Cooperative Education it has proven most effective to offer three basic plans to meet the needs of a variety of students.

  Alternate Semester: Two students hold one full-time work station on a year-around basis. During each semester one stu ent is in school while the other works full time.

  Parallel Plan: Students hold part-time, afternoon and evening, or swing shift jobs with appropriate college class loads.

  Evening College New Careers: Special arrangements are made for studies related to full-time employment and new career goals of students.

* Business personnel, advisory committees, college students, and educators are enthusiastic in their support of the concept of Cooperative Education.

* Students participating in the program report a sense of involvement with the community that has been lacking in previous educational experiences. Statements of increased motivation to succeed in academic work have been reported in nearly all follow-up interviews.

* Direct relationship of the career goals of the student to intensive work experience in the community is the key concept of interest to students. Employers are willing to provide "in-depth" work opportunities when students are available to cover a full-time work station.

* Cooperative Education field experience credit does not replace, or substitute for, general education requirements in community college programs. In most cases, all present requirements for Associate in Arts degree programs remain unchanged. Cooperative experience serves however to provide depth and enrichment experiences for the major field of study.

* Emphasis has been placed on securing opportunities for students to branch out beyond the offerings of our present programs. Examples: Engineering Technician, food service industries, retail and wholesale sales, jet engine mechanic helpers, computor tape industry foreman, communication engineer trainee timekeeper accountant, data processing on a variety of equipment, public relations, teacher assistant, VISTA, City and County government trainees and others.

* Evaluation statements from employers are universally favorable. The very few cases of student rejection after placement on the job resulted in letters or statements of support for the concept of cooperative education emphasizing the desire of companies to remain in the program.

* Emphasis has been placed on developing Cooperative work-study relationships for students having difficulty with traditional programs. Success experiences are documented for many students.

* Veterans and students with financial need have been particularly attracted by the opportunity to combine work and study.

* Transfer arrangements for the Cooperative plan have been established with San Jose State College schools of business, engineering, and industrial technology; San Francisco State College Design and Industry program, and the Department of Education; University of California School of Engineering; and Golden Gate College School of Business and Commerce, and others.

* New Careers Through Cooperative Education: Many capable full-time employees work at entrance-level assignments with little hope for advancement because of the lack of educational credentials.

  One phase of the Cooperative program aims to provide evening college instruction at convenient times and places for employed workers to participate. Career related on-the-job work experience strengthens the educational process through practical application of classroom theory. The opportunity to earn intermediate certificates and the Associate in Arts degree opens the door to advancement with present employers or transfer to other jobs. Credit for Cooperative field experience is included in the program.

* Call to Action was a joint project with the California Junior College Committee on Education for the Disadvantaged. A booklet which was developed emphasized cooperative education as one of the answers to the problems of educating disadvantaged students.

* A special program has been developed with VISTA which has been reported as being highly successful by Mr. Will Hall, West Coast Director of VISTA projects. This project provided special services to negro and Mexican-American migrant workers in Northern California.

* 157 packets of literature have been distributed to colleges and universities, state departments of education, and other agencies concerned with education. Reports of progress have been distributed to all California community colleges.

* Plans are underway to strengthen the guidelines for community college programs in cooperative work experience education to prevent abuses which previously occurred in California colleges relating to apprenticeship programs and others involving work experience.

* Additional planning for articulation with State Colleges, plans for inter-related instructional programs, guidelines for operation, and recommendations for specific legislation to implement meaningful programs should occur through coordinated efforts between colleges.

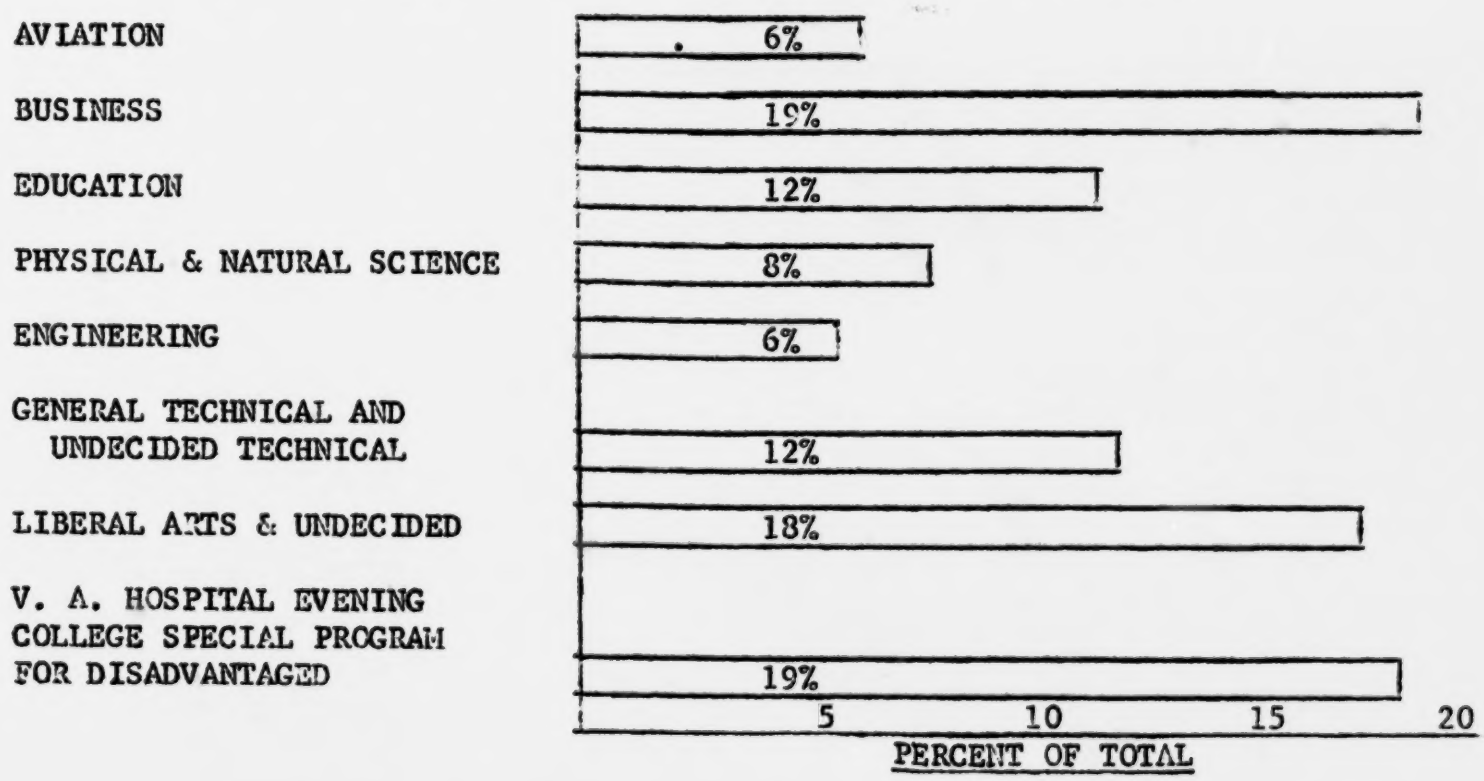
A STATISTICAL SUMMARY REPORT OF THE COOPERATIVE EDUCATION PROGRAM AT THE COLLEGE OF SAN MATEO, CAÑADA COLLEGE AND SKYLINE COLLEGE FROM July 1, 1967 to September 1, 1969

The three colleges of the San Mateo Junior College District serve a total of 24,000 students in day and evening college enrollments.

STATISTICAL DATA

Number of students requesting placement in the Cooperative Education Program with records on file		983
Number of semester enrollments for credit during two years of demonstration at College of San Mateo and Cañada College		519
Students placed in non-credit Cooperative work stations, for reasons of partial employment or other factors from Cooperative Education referrals	(est.)	350
Veterans' Hospital New Careers Cooperative Education students (Disadvantaged Program)		175
Number of employers participating in Cooperative Education Program		96
Number of companies interested in developing Cooperative Work Stations with San Mateo College District		190
Requests from other colleges for packets of information regarding the Cooperative Education Program		157

PERCENTAGE OF COOPERATIVE EDUCATION STUDENTS BY MAJOR



STATEMENTS FROM CJCA-CROOTS POSITION PAPER ON COOPERATIVE EDUCATION

Prepared by Dr. Robert Bennett

IMPROVED CURRICULUM

Among the challenges facing community college educators for the 1970's is the task of developing bold new curriculum designs which combine the educational advantages of traditional classroom instruction with off-campus career-related work experience.

Movements toward establishing new and revitalized programs for career training using this concept have received much attention recently. One report, prepared by the American Association of Junior Colleges,[1] describes the current pressure to increase vocational education opportunities for students in community colleges. Supporting viewpoints are presented by business, industrial, labor, and government leaders who see the critical need for technical and para-professional personnel in the employment patterns of the future. Their statements reflect a new urgency for discovering solutions to the problems of training an adequate supply of workers skilled in the modern techniques of business and industry. They turn in ever-increasing numbers to community colleges for assistance.

THE NEED FOR RELEVANCY

Couples with this trend toward cooperative interaction programs is a growing demand among students and employers for education which is more relevant to the needs of a modern society. Students seek ways to become directly involved with the latest systems of producing goods and services. Employers seek workers who can quickly assume productive roles. Students desire participation in career situations. Employers desire youthful talent with advancement potential. Students seek early involvement while employers seek early production capability. So it

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[1] Gleazer, Edmund J., "Junior Colleges in the United States: Trends and Directions" in NATIONAL BUSINESS EDUCATION QUARTERLY, NABTE Bulletin 37. A department of the National Education Association, Washington, D. C. 1968.

becomes the task of the educator to provide the connective linkage to serve both needs. Career-centered college programs, combining high quality classroom instruction with related community field experiences in the "laboratories of business and industry," can provide youth with these educational opportunities which lead directly to productive involvement in the community.

Innovative curricular offerings are needed at this time to prepare large numbers of students for a trillion dollar per year national economy which has been predicted for the year 1972.[2] Production and marketing of goods and services at such a level will have a significant impact on community colleges. Competent technicians and mid-management employees will be in great demand. Since schooling has traditionally served as one measure of technical competence, education beyond the level of high school can be expected to receive high priority on the lists of employment requirements in the future. Cooperative work experience education programs can serve as one realistic and practical plan for meeting this increased demand for skilled employees.

WORK EXPERIENCE EDUCATION

A combination of on-campus college study with off-campus direct student interaction on the job in paid work experience promises to be an effective arrangement for meeting many career training challenges of the future. Especially in California community colleges, there are abundant opportunities for expansion of this curriculum concept. The close relationship between colleges and their surrounding communities provides a multitude of ways in which cooperative arrangements can be established.

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2 Pusinski, Roman C., Chairman of the Subcommittee on Education in the United States Senate. Reported in Our System of Distribution and Its Challenge to Educators, R. C. Van Wagenen, Bureau of Business Education, California Department of Education, 1968.

A nationwide appraisal of college cooperative work-study programs was undertaken in 1960. Dr. Ralph Tyler,[3] serving in a dual role as Director of the Center for Advanced Study in the Behavioral Sciences at Stanford University and Chairman of the Committee for the Study for Cooperative Education, reported a summary and conclusions of this research effort.

BACKGROUND FOR THE STUDY

Cooperative Education of this type has a history in the United States dating back to 1907 when Professor Herman Schneider established such a program for engineering students at the University of Cincinnati. Since that time, over 60 colleges have developed various forms of the plan. The largest such operation is located at Northeastern University in Boston with over 20,000 students in the cooperative program.

There is a definite trend among colleges toward developing broadly-based, flexible plans whereby students can gain the benefits of improved educational opportunities through combinations of work and study.

Information provided by the previously mentioned nationwide study of college-level cooperative work experience education programs is important for predicting the potential value of such curricula for California community colleges. The research provides information gathered from the experience of many colleges from the time of earliest experiments to the state of development in 1960. Several of the findings indicate positive trends which may have significant impact on community college educational planning for the future. The following brief statements give an overview of many notable features included in observations and conclusions.

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3 Tyler, Ralph W. and Annice L. Mills, Report on Cooperative Education. The complete documentation of this study is contained in Work-Study College Programs: Appraisal and Report of the Study of Cooperative Education by James W. Wilson and Edward H. Lyons, published by Harper and Brothers, New York, 1960.

VALUES OF COOPERATIVE WORK EXPERIENCE EDUCATION

1. Colleges offering cooperative work-study programs have access to the "laboratories of business and industry." Students can be provided with experience in the latest business procedures and industrial techniques. Sophisticated equipment which is not otherwise available for student use becomes available as a part of the work process.

2. Curricular offerings can be expanded to include areas of study which are not possible through on-campus lecture and book-study procedures. Theoretical classroom studies can be supported by field experiences in the community and beyond. Geographical limitations are removed. It is possible for students to gain work experience in other environments and in distant locations.

3. Specialized curricular offerings are made possible for small groups or individuals. Through variations in the work phase of the cooperative experience, there is opportunity for students to have a wide variety of career experiences that would not be available in traditional programs.

4. Economy of operation is increased. Students gaining experience in off-campus situations do not require classroom space. This makes possible an increased use of facilities.

5. By coordinating work experience with the campus educational program, theory and practice are more closely related and students find greater meaning in their studies. Coordination is the key to successful programs.

6. The inter-relating of work and study increases student motivation. As students see connections between the jobs they hold and the things they are learning on campus, greater interest in academic work develops. Employers cooperate by strongly encouraging student employees to return to school between work phases. Advancement on the job is closely related to the formal education process.

7. For many students, work experience contributes to a greater sense of responsibility for their own efforts, greater dependence upon their own judgments and a corresponding development of maturity.

8. Work experience involves students in relations with co-workers from a variety of backgrounds. Because success on the job requires constructive relationships with colleagues, most students in work experience education develop greater understanding of other people and greater skills in human relations.

9. Cooperative work-study education provides career exploration opportunities. Students gain the advantage of testing their skills in practical applications of performance. They have a chance to measure their ability to compete on the job.

10. Earnings from employment experience provides for some students a means of gaining a college education. The assurance of having a job gives the cooperative student the financial security needed to continue in a college program.

Work experience education students also gain employment experience and contacts which place them far ahead of regular graduates. A head start in salary and position usually results.

11. College faculty members are able to keep in touch with business and industry through employers and students. Refinements in curriculum and instruction emerge from the problems encountered by students in their work periods.

12. The business community is provided with a means for recruiting capable young employees. Potential management and supervisory talents can be recognized through short periods of responsibility on work assignments. Employers have an opportunity to promote the students who meet special requirements of the job. This serves to upgrade the value of the employee to the company and to assure more rapid advancement for the student.

CURRICULUM DESIGN

Three patterns of cooperative work experience education programs have proven to be effective. They might be designated as the alternate semester program, the parallel program, and the extended day or evening college program. Each contains one necessary common element, that of coordination--an action link--between the on-campus instructional program and the field experience provided away from school.

ALTERNATE SEMESTER

One plan, an alternate semester arrangement, provides students with the opportunity to spend a full semester in college and the following semester on the job. Two students hold one full-time work station in business or industry. While one is in college, the other is working. This continuous year-around cycle, through the summer and with the addition of a few evening classes and small amounts of work experience credit, allows each student to complete a four-year college program in five years. For the community college student, an Associate in Arts two-year degree can be completed in two-and-one-half years.

The studies by Tyler and Associates[4] show that cooperative work-study programs are most effective for students when the work periods are of lengthy duration. Early experiments at the University of Cincinnati and Antioch College used alternate periods of one work week combined with one week of study. Later, the work and study periods were extended to six weeks and finally to the quarter or semester alternation.

Experience shows that intensive student inter-action with the work phase of the curriculum occurs best when the time element is extended. Students require time to become acquainted with people on the job. Routine procedures need to be assimilated. Supervisor relationships have to be established. All of this activity, a new dimension for students to learn about the world of work, requires adequate time for completion. Those schools using the alternate plan have tended to adopt the semester or quarter length periods of time as being most satisfactory for this purpose.

Work experience and career exploration opportunities are virtually unlimited with such a curriculum design. A pair of students can maintain a continuous work station in almost any geographic location. Business and technical students are afforded unusual possibilities for

[4] Ibid. p. 3

direct involvement in work situations which may have great impact on motivation for future college studies. One airline has considered flying work experience education students overseas for their job assignments on a semester alternation basis. Liberal Arts students have the opportunity to participate in VISTA projects throughout the nation and could conceivably work in a variety of state and local government environments.

PARALLEL PLAN

A second pattern of work experience education is organized so that the student's employed work experience is parallel or concurrent with enrollment in regular college classes. Normally, it would be expected that the student would spend approximately one-half day in college classes and the other half-day in the working situation in business or industry. The hours of work may be flexible; i.e., morning, afternoon, or evening, and may be 10-30 hours per week. The class load may also vary. However, students would be expected to carry 10 to 14 semester units in addition to the work experience activity.

This pattern has certain advantages. Students enjoy an uninterrupted program of college study. They maintain their academic, social, and student body relationships. The information gained in class and at work may be inter-related and mutually supportive. The close support between classroom theory and practice at work enhances both.

In addition, the student has a continuous source of income to finance his education. Completion of the AA degree is possible in the normal two-year period.

Educationally, the parallel plan maintains the principle of extensive work periods and assumes a continuity of employment for full realization of job potential for training. The close support of academic instruction and college coordination with the work situation makes both meaningful, and hence more productive in educational results.

However, the part-time employment situation has certain disadvantages. Some employers may find it difficult to arrange work stations for part-time people. Thus, the full range of job opportunities may be restricted. Students are not considered in the same light as a full-time employee and lose the educational advantage of full-time responsibility to the employer. There may be geographic problems since the place of employment must be in reasonable proximity to the college.

EXTENDED DAY WORK STUDY PROGRAMS

A third form of the work experience education curriculum design is of particular benefit to students enrolled in extended day or evening divisions of the community college.

Students attending evening college, while employed during the daytime, are offered an opportunity to update and upgrade their work skills through work experience education. The basic principle remains one of educational growth through parallel involvement in theoretic studies and field experience in career areas of the student's choice. Opportunities become available for advancement on the job and for a variety of experiences within places of employment.

Under this planned and coordinated work-study combination, there is the additional advantage to students of increasing their employer's awareness of student educational progress. Supervisors are alerted to the fact that employees are attending college with the purpose in mind of advancement on the job. As a result, prior consideration can be given to work-study employees who are seeking job advancement and new positions.

Other factors of the extended-day work experience education plan should also be considered. Students need to become aware of the longer period of time required on this pathway to completion of degree requirements. The relationship between formal classroom study and work experience needs to be clearly established. Reasonable work-study arrangements with employers have to be developed and implemented.

Attention should be directed also to credit allowance for work phases of the curriculum which must remain in accord with provisions of California Education Code section 115.22 on work experience education. Limitations are placed on the number of credits allowed per semester and the total number of credits which can be granted for work experience.

Considering the overall need for specialized training in business and industry, it becomes quite evident that community colleges which do provide extended-day work experience education programs will be making a significant contribution toward meeting needs of employees involved in the increasingly complex labor market. Evening college can provide a wide variety of opportunities for educational growth. Individual tailoring of programs to meet special needs is possible through planned programs of this type.

One additional significant feature of this type of program is its compatibility with the New Careers[5] concept which has recently received prominent recognition. Both plans have the goal of improving the status of employees through full-time on-the-job experience in conjunction with formal training.

Advantages and limitations of each of these three kinds of work experience education programs should be considered in determining the plan, or combination of plans, to be offered by individual community colleges.

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[5]Pearl, Arthur and Frank Riessman, New Careers for the Poor, New York: Free Press, 1965.
Also see: Education Change: Why - How - for Whom, from the unedited speeches of Dr. Arthur Pearl, Department of Education, University of Oregon, Eugene, Oregon; and
New Careers and the Manpower Crisis in Education, NEA Symposium on Educational Manpower held in Washington, D.C., 1967. Available through National Education Association or University of Oregon, Department of Education.

COOPERATIVE EDUCATION

FINANCIAL REPORT OF INCOME AND EXPENDITURES DURING TWO YEAR DEMONSTRATION PROJECT, SAN MATEO JUNIOR COLLEGE DISTRICT

INCOME

Ford Foundation Grant	$ 60,000.	
Merchandising: Cooperative Education Project, Department of Education, California Community Colleges	4,607.	
Transportation: Cooperative Education Project, Department of Education, California Community Colleges	2,650.	
Total Income		$ 67,257.

* * * * * *

EXPENDITURES

Salaries: 1967-1968

Dr. Bennett	$ 16,500.	
Mr. Mainland	140.	
Mr. Janssen (5 mos. @ 1/2 time)	3,325.	
Secretary	4,678.	
Total Salaries 1967-1968		$ 24,643.

Other Expenses: 1967-68

Supplies, Audio-visual equipment, mileage, conferences, publications, long distance telephone calls, postage and other expenses of research and development of cooperative education as recorded by purchase order and standard accounting procedures on file with the San Mateo Junior College District	7,149.

COOPERATIVE EDUCATION

FINANCIAL REPORT OF INCOME AND EXPENDITURES (Page Two)

Salaries: 1968-1969

Dr. Bennett	$ 17,300.	
Mr. Mainland	1,500.	
Mr. Janssen (5 mos. @ 2/5 time)	2,078.	
Mr. Marchi (Cañada, 1/4 time)	3,3435.	
Mr. Bestall (Skyline)	1,500.	
Secretary	5,513.	
Total Salaries 1968-69		$ 31,326.

Other Expenses: 1968-1969

Supplies, conferences in Boston, Houston, Washington and California cities, equipment for cooperative student record keeping, publications, travel in job development, postage and mailing, long distance telephone calls, audio-visual equipment for job development, multi-campus student assistance and other expenses of research and development of cooperative education as recorded by purchase order and standard accounting procedures on file with the San Mateo Junior College District	6,195.
TOTAL EXPENDITURES FOR TWO YEAR PROGRAM	$ 69,313.

EVALUATION, LEGISLATION AND SPECIAL PROGRAMS

On the following pages evaluation statements from students in cooperative education and from employers hiring cooperative students have been provided to illustrate the level of support for this plan. Extensive evaluation will be continued as the programs develop.

Legislation to provide financial support for cooperative work experience education in California resulted from California Junior College Association efforts jointly with the California Community Colleges and support developed from other organizations. A position paper on the need for this kind of financial support served as the basis for five appearances before legislative committees during the last session of the California legislature.

Cooperative education studies and new programs have been developed in Distributive and Transportation careers. Para-professional teacher assistants will be trained using the cooperative education design.

New Careers Through Cooperative Education is an attempt to relate full-time on the job work experience to college studies provided at the end of the working day and by television in the evening. This program appears to have great potential for the disadvantaged worker who is employed at an entrance level occupation with little chance for advancement. The community college degree through cooperative education will provide the advancement potential and opportunity to transfer to other organizations.

The next step in the development of cooperative education for community colleges is the establishment of a consortium effort to demonstrate on a large scale the curriculum design and to provide a system for observation of programs. Opportunity should be provided for on-the-scene visitation and training of personnel who wish to transfer the cooperative education curriculum design to other community colleges.

EVALUATION

John Arnold is a Cooperative Education student of the College of San Mateo who returned to the campus in February 1968 after spending a semester working at Lockheed Missiles and Space Company as an engineering assistant.

He reports the following results:

> "The one word that describes the Co-op program is <u>contact</u>. There is contact with industry for the first professional experience. There is contact with people who are knowledgeable in your areas of interest. There is contact with materials and ideas of your interest and with new responsibilities and duties.
>
> "My work assignments of the past six months have been extremely profitable. The experience has been profitable from a monetary, from an educational, and most importantly from a professional standpoint.
>
> "Speaking from a first-hand knowledge, anyone interested in manufacturing engineering, at LMSC, has a bright future.
>
> "The educational enlargement that I have received in the past six months has been outstanding. I have been fortunate enough to work with a young man who is quite capable and intelligent. The responsibilities and duties are many. However, my time was spent primarily in hydraulics. I have learned more on the subject of hydraulics than I believe I will learn in the remainder of my schooling.
>
> "The personal contact has been the most gratifying part of this work period. I can say with satisfaction that all the people that I have come in contact with at LMSC have been most helpful.
>
> "I would recommend the areas where I have worked through the Cooperative plan not only to those interested in manufacturing, but also to anyone interested in becoming knowledgeable on how a large aerospace industry functions."
>
> /s/
>
> John H. Arnold

COOPERATIVE EDUCATION AT COLLEGE OF SAN MATEO
EMPLOYER EVALUATION OF STUDENT ON-THE-JOB PERFORMANCE
(N = 135 student evaluations)

		5.00 Scale		
RELATIONS WITH OTHERS	Exceptionally well accepted	4.28	36%	
	Works well with others		58%	
	Gets along satisfactorily		5%	
	Difficulty working with others		1%	
	Works very poorly with others		-	
JUDGMENT	Exceptionally mature	3.87	22%	
	Above average in making decisions		42%	
	Usually makes the right decision		36%	
	Often uses poor judgment		-	
	Consistently uses bad judgment		-	
ABILITY TO LEARN	Learns very quickly	4.30	46%	
	Learns rapidly		37%	
	Average in learning		16%	
	Rather slow to learn		-	
	Very slow to learn		-	
ATTITUDE APPLICATION TO WORK	Outstanding in enthusiasm	4.10	27%	
	Very interested and industrious		57%	
	Average in diligence and interest		15%	
	Somewhat indifferent		1%	
	Definitely not interested		-	
DEPENDABILITY	Completely dependable	4.24	43%	
	Above average in dependability		38%	
	Usually dependable		18%	
	Sometimes neglectful or careless		1%	
	Unreliable		-	
QUALITY OF WORK	Excellent	4.27	39%	
	Very good		49%	
	Average		12%	
	Below Average		-	
	Very poor		-	
OVERALL RATING	Excellent	4.31	38%	
	Very good		54%	
	Average		8%	
	Marginal		-	
	Poor		-	
ATTENDANCE	Regular	99%	99%	
	Irregular		1%	
PUNCTUALITY	Regular	98%	98%	
	Irregular		2%	

COLLEGE OF SAN MATEO

DEPARTMENT OF CO-OPERATIVE EDUCATION

SAN MATEO, CALIFORNIA

STUDENT REPORT

(TO BE FILLED OUT BY STUDENT)

INSTRUCTIONS: The student should complete this portion of the report form and leave it with the employer for his evaluation. The employer should mail this form to the College in the accompanying self-addressed envelope.

Date FEB. 1, 1968

Name WARD (Last) WAYNE (First) K. (Middle)

College SAN MATEO Major ELECT. Year SOPH. Division

Employing Firm THE PACIFIC TEL. AND TEL.

Department PLANT ENGINEERS Job Title ENGINEER ASST.

Supervisor's Name JIM REEVES Title SENIOR ENGINEER

Attendance: Time Late 0 Reason

Times Absent 2 Reason ILLNESS

Gross Pay: Hour Week $102.00 Gross Pay Full Period $486.00

Brief Job Description: WITH THE AIDE OF AN ENGINEER I PREPARED CONSTRUCTION DRAWINGS DEALING WITH THE PLACING OR REMOVING OF TELEPHONE COMPANY PLANT.

Comments: I FEEL THAT THIS IS THE BEST JOB FOR GAINING AN OVERALL KNOWLEDGE OF HOW THE TELEPHONE COMPANY WORKS. THIS POSITION ALSO PROVIDED ~~PROVIDED~~ ME WITH VALUABE EXPERIENCE IN WORKING WITH MANY PEOPLE.

EMPLOYER'S EVALUATION

(TO BE FILLED OUT BY EMPLOYER)

The employer will please express his candid opinion of this student as a worker in his employ. Criticisms and comments are earnestly solicited. This information will be utilized by the co-ordinator for the guidance of the student.

RELATIONS WITH OTHERS
- ☐ Exceptionally well accepted
- ☒ Works well with others
- ☐ Gets along satisfactorily
- ☐ Has some difficulty working with others
- ☐ Works very poorly with others

ATTITUDE—APPLICATION TO WORK
- ☐ Outstanding in enthusiasm
- ☒ Very interested and industrious
- ☐ Average in diligence and interest
- ☐ Somewhat indifferent
- ☐ Definitely not interested

JUDGMENT
- ☐ Exceptionally mature
- ☐ Above average in making decisions
- ☒ Usually makes the right decision
- ☐ Often uses poor judgment
- ☐ Consistently uses bad judgment

DEPENDABILITY
- ☒ Completely dependable
- ☐ Above average in dependability
- ☐ Usually dependable
- ☐ Sometimes neglectful or careless
- ☐ Unreliable

ABILITY TO LEARN
- ☒ Learns very quickly
- ☐ Learns rapidly
- ☐ Average in learning
- ☐ Rather slow to learn
- ☐ Very slow to learn

QUALITY OF WORK
- ☐ Excellent
- ☐ Very good
- ☒ Average
- ☐ Below average
- ☐ Very poor

	Reg.	Irreg.		Reg.	Irreg.
ATTENDANCE:	☒	☐	PUNCTUALITY	☒	☐

	Excellent	Very Good	Average	Marginal	Poor
OVERALL RATING:	☐	☒	☐	☐	☐

COMMENTS (over if necessary) Wayne did a very good job for us. The two instances where he didn't rate higher than average is due to his inexperience entirely. He more than earned his salary and we are looking forward to his return in June.

(Signed) J.C. Reeves Jr, Senior Engineer
(Company Representative)

This report has been discussed with the student
- Yes ☐
- No ☒

COLLEGE OF SAN MATEO

DEPARTMENT OF CO-OPERATIVE EDUCATION

SAN MATEO, CALIFORNIA

STUDENT REPORT

(TO BE FILLED OUT BY STUDENT)

INSTRUCTIONS: The student should complete this portion of the report form and leave it with the employer for his evaluation. The employer should mail this form to the College in the accompanying self-addressed envelope.

Date DEC 14, 1967

Name VRAT DEV (nmn)
(Last) (First) (Middle)

College CSM Major ENGIN. Year 14 Division

Employing Firm LOCKHEED MISSILES & SPACE CO

Department 81-82, MECHANICAL SUPPORT Job Title ENGIN. CO-OP STUDENT

Supervisor's Name GE. THOMPSON Title SUPERVISOR

Attendance: Time Late 1 Reason HEAVY TRAFFIC
Times Absent 0 Reason NEVER SICK (VERY HEALTHY)

Gross Pay: Hour /
Week $130
Gross Pay
Full Period $520.00

Brief Job Description

MAKE SCHEDULES OF EQUIPMENT DELIVERY DATES, SOME DRAFTING, OBSERVE HARDWARE TESTING, SMALL DESIGN PROBLEMS, LOCATING PARTS (LOST AFTER DELIVERY), FILING & GENERAL OFFICE WORK

Comments: MY JOB ALLOWED ME TO SEE HOW A LARGE COMPANY OPERATES AND TO BECOME FAMILIAR WITH THE PROBLEMS & ADVANTAGES OF SIZE.

EMPLOYER'S EVALUATION

(TO BE FILLED OUT BY EMPLOYER)

The employer will please express his candid opinion of this student as a worker in employ. Criticisms and comments are earnestly solicited. This information will be utilized by the co-ordinator for the guidance of the student.

RELATIONS WITH OTHERS
- [X] Exceptionally well accepted
- [ ] Works well with others
- [ ] Gets along satisfactorily
- [ ] Has some difficulty working with others
- [ ] Works very poorly with others

ATTITUDE—APPLICATION TO WORK
- [ ] Outstanding in enthusiasm
- [X] Very interested and industrious
- [ ] Average in diligence and interest
- [ ] Somewhat indifferent
- [ ] Definitely not interested

JUDGMENT
- [ ] Exceptionally mature
- [X] Above average in making decisions
- [ ] Usually makes the right decision
- [ ] Often uses poor judgment
- [ ] Consistently uses bad judgment

DEPENDABILITY
- [X] Completely dependable
- [ ] Above average in dependability
- [ ] Usually dependable
- [ ] Sometimes neglectful or careless
- [ ] Unreliable

ABILITY TO LEARN
- [X] Learns very quickly
- [ ] Learns rapidly
- [ ] Average in learning
- [ ] Rather slow to learn
- [ ] Very slow to learn

QUALITY OF WORK
- [X] Excellent
- [ ] Very good
- [ ] Average
- [ ] Below average
- [ ] Very poor

ATTENDANCE:	Reg. [X]	Irreg. [ ]	PUNCTUALITY	Reg. [X]	Irreg. [ ]
OVERALL RATING:	Excellent [X]	Very Good [ ]	Average [ ]	Marginal [ ]	Po [ ]

COMMENTS (over if necessary) THIS YOUNG MAN IS AN ALERT, INTELLIGENT, PERSONABLE ASSOCIATE AND HAS BEEN A PLEASURE TO WORK WITH. HIS ABILITY TO ACCEPT ANY ASSIGNMENT AND WITHIN A REASONABLE TIME, WITH OBSERVATION SUPERVISION ON A JOB SATISFACTORILY IS AN ATTRIBUTE TO HIMSELF & U.

Signed J. S. Dowd MESA
(Company Representative)

This report has been discussed with the student Yes [ ] No [X]

COLLEGE OF SAN MATEO

DEPARTMENT OF CO-OPERATIVE EDUCATION

SAN MATEO, CALIFORNIA

STUDENT REPORT

(TO BE FILLED OUT BY STUDENT)

INSTRUCTIONS: The student should complete this portion of the report form and leave it with the employer for his evaluation. The employer should mail this form to the College in the accompanying self-addressed envelope.

Date _____

Name Gilles, Anthony J.
(Last) (First) (Middle)

College SMC Major _____ Year _____ Division _____

Employing Firm V.A. Hospital

Department Nursing Job Title Nursing Aide

Supervisor's Name Miss Drury R.N. Title _____

Attendance: Time Late _____ Reason _____
Times Absent _____ Reason _____

Gross Pay: Hour _____ Gross Pay _____
Week _____ Full Period _____

Brief Job Description: To provide comprehensive total nursing care for patients, phy. + emotional.
A. Maintaining + conducting adequate equipment for efficient + safe operation in admin. appropriate nursing care depts.

Comments: B. Discussing attendance at educational institutions, community + professional workshops, conferences, professional societies, etc.
C. Discussing meaningful + current articles + reports.

-over-

EMPLOYER'S EVALUATION

(TO BE FILLED OUT BY EMPLOYER)

The employer will please express his candid opinion of this student as a worker in his employ. Criticisms and comments are earnestly solicited. This information will be utilized by the co-ordinator for the guidance of the student.

RELATIONS WITH OTHERS	ATTITUDE—APPLICATION TO WORK
☑ Exceptionally well accepted	☑ Outstanding in enthusiasm
☐ Works well with others	☐ Very interested and industrious
☐ Gets along satisfactorily	☐ Average in diligence and interest
☐ Has some difficulty working with others	☐ Somewhat indifferent
☐ Works very poorly with others	☐ Definitely not interested
JUDGMENT	**DEPENDABILITY**
☐ Exceptionally mature	☑ Completely dependable
☑ Above average in making decisions	☐ Above average in dependability
☐ Usually makes the right decision	☐ Usually dependable
☐ Often uses poor judgment	☐ Sometimes neglectful or careless
☐ Consistently uses bad judgment	☐ Unreliable
ABILITY TO LEARN	**QUALITY OF WORK**
☐ Learns very quickly	☑ Excellent
☑ Learns rapidly	☐ Very good
☐ Average in learning	☐ Average
☐ Rather slow to learn	☐ Below average
☐ Very slow to learn	☐ Very poor

ATTENDANCE:	Reg. ☑	Irreg. ☐	PUNCTUALITY	Reg. ☑	Irreg. ☐

OVERALL RATING:	Excellent ☑	Very Good ☐	Average ☐	Marginal ☐	Poor ☐

COMMENTS (over if necessary) Is an experienced employee who accepts any assignment/responsibility delegated by him. Outstanding in relations w/ co-workers. Exceptionally dependable, reliable, capable mature. Trustworthy, persistent

(Signed) Drury RN - VA - Head nurse
(Company Representative)

This report has been discussed with the student Yes ☑ No ☐

FACT SHEET

SENATE BILL #672 WORK EXPERIENCE EDUCATION

* Average daily attendance apportionment for work experience students in junior college programs will not increase state costs per student. Rather, it will allow students to move into desirable and relevant educational programs of career development in place of other programs. The cost to the state for apportionment purposes will be the same in either case.

* The California Junior College Association, the Board of Governors of the California Community Colleges and many other groups have taken a firm stand in support of the development of new and revitalized community college work experience curriculum designs which combine classroom instruction with off-campus work experience in business and industry.

* Institutions of higher education, such as Northeastern University, University of Cincinnati and Antioch College, which are fully committed to this kind of college education have reported savings of up to 25% in overall costs through cooperative work experience programs with business and industry.

* Students in these programs have access to highly sophisticated equipment and training opportunities. Banks, stock exchanges, hospitals, industrial plants, civic agencies and businesses of all kinds employ students through cooperative work experience programs. Training is provided with paid work experience on numeric controlled milling machines, computors, engineering and laboratory equipment that cannot be made available in the college classroom.

* Cooperative work experience contributes to a greater sense of student responsibility, improvement of judgment, constructive relations with colleagues and development of skills in human relationships. Students gain a chance to measure their ability in practical applications of performance.

* Earnings from employment experience provides for some students a means of gaining a college education. The assurance of having a job related to college work gives the cooperative work experience student the financial security to continue in a college program.

Prepared for Senator Alquist by
Dr. Robert L. Bennett, Coordinator
of Cooperative Education for the
San Mateo Junior College District

32—San Mateo The Times★★★Tues., Sept. 9, 1969

Cooperative Education Plan Extended Statewide

"Cooperative education," pioneered in the West at College of San Mateo, now may be made available with state support to students at junior colleges throughout California, thanks to legislation signed recently by Governor Ronald Reagan.

San Mateo's demonstration project in the plan, which provides students with off-campus educational work experience in a technical, business or professional setting, alternating with semesters on-campus in traditional college classes, was financed by a two-year Ford Foundation grant.

Chancellor Clifford G. Erickson of San Mateo Junior College District said the bill signed by Governor Reagan will allow the state to pick up part of the cost of offering cooperative education and thus will enable many junior colleges to follow College of San Mateo's lead.

The legislation, introduced by Senator Alfred Alquist (D-Santa Clara County), was developed from material originated by a California Junior College Association (CJCA) committee now headed by Dr. Robert L. Bennett, assistant to Chancellor Erickson for resource development and project coordination.

It was Dr. Bennett who directed the grant-supported cooperation education project at College of San Mateo and helped introduce the plan also at the district's new Canada and Skyline colleges.

"Three people deserve special credit for pushing this important legislation through," said Erickson.

He cited the work of Senator Alquist in the Legislature, the leadership of Dr. Norman Watson, president of CJCA and superintendent of Orange Coast Junior College District in Southern California, and the coordinating efforts of Dr. Bennett.

"Cooperative education has proved to be a most effective means of providing a sound and meaningful college education for many students," Erickson said. "The value of employment as a means of exploring careers and for professional development has been amply demonstrated, both in our district and elsewhere in the nation.

"Now this plan can be implemented statewide and assume a position of major importance, for the benefit of literally thousands of college students."

SACRAMENTO ADDRESS
ROOM 5031
STATE CAPITOL 95814
AREA CODE 916—445-9740

DISTRICT ADDRESS
777 NORTH FIRST STREET
SAN JOSE, CALIF. 95112
AREA CODE 408—286-8318

ALFRED E. ALQUIST
STATE SENATOR
THIRTEENTH SENATORIAL DISTRICT
SANTA CLARA COUNTY

COMMITTEES
LOCAL GOV
VICE CH
EDUCATION
NATURAL R
TRANSPORTA
FISH AND G

CALIFORNIA LEGISLATURE

Senate

June 19, 1969

Dr. Robert L. Bennett
San Mateo Junior College District
2040 Pioneer Court
San Mateo, Calif. 94402

Dear Dr. Bennett:

Your assistance with SB 672 has been invaluable. Without it I doubt the bill would have passed our first committee.

It is a good measure, and I feel confident now it will be enacted into law.

Cordially,

A. E. Alquist

ALFRED E. ALQUIST

AEA/jw

CONCLUSIONS FROM SPECIAL RESEARCH PROJECT:

DISTRIBUTIVE CAREERS THROUGH COOPERATIVE EDUCATION

EMPLOYER INTEREST

* 54 percent of the fifty employers interviewed stated that the alternate semester plan for Distributive Careers through Cooperative Education is a practical plan for recruiting and developing new personnel in their places of business.

* An additional 12 percent believe it may be possible to develop alternate semester Cooperative plans to meet their needs.

* 14 percent of the employers stated that a Cooperative plan based upon part-time work combined with continuous enrollment in school would be more practical for their businesses.

* A total of 80 percent of the employers interviewed are in agreement with the principle of Cooperative Education as a work-study plan which could be used by their businesses.

* 20 percent of the employers interviewed stated that they saw no possibility of such a program working in their company.

REASONS FOR ACCEPTANCE

* Opportunities for recruiting young college trained employees and full-time coverage of work stations are the two most commonly stated reasons for interest in the plan.

MINORITY STUDENTS

* Employers interviewed for this study are entirely receptive to the hiring of minority student employees on the Cooperative plan. There is no evidence of discriminatory hiring practives for capable workers. Further study of this point over a longer period of time will be necessary to adequately demonstrate employer practices.

RECRUITING

* Cooperative Education serves as a recruiting device for Distributive careers. Students in data processing, accounting, management, and technical majors often begin working in distributive work stations. As an example, one student enrolled in commercial aviation, works for a wholesale aviation parts and supply distributor. He sees an interesting career in aviation sales developing as a result of this experience.

4-4 PLAN

* Part-time work, combined with study, (sometimes called the 4-4 plan) is acceptable to businessmen if a full morning and a full afternoon schedule can be combined. Scheduling of classes for students becomes difficult, however. The student often misses his lunchtime in driving to his job. Work stations are limited to close commuting distance from the school.

SWING SHIFT

* Many companies like to employ students on full-time swing shift work. Colleges may not be aware of the numbers of students attempting full employment and maintenance of studies. Slective service requirements have forced many low income students to attend college this way. 12 units of credit are a minimum load for deferment. However veterans and women students can carry a reduced class load and make slow, but satisfactory progress with this full work arrangement.

TABLE 1

WOULD YOU USE COOPERATIVE EDUCATION STUDENT EMPLOYEES IN YOUR PLACE OF BUSINESS?

A SUMMARY OF EMPLOYER RESPONSES TO INTERVIEWS

Type of Business	Yes	Maybe	Part-time Only	No
TOTAL (50)	27	6	7	10
	54%	12%	14%	20%
Grocery Markets	3		1	
Appliance Co. (Wholesale)	1			
Department Stores	3	3	2	3
Shoe Stores	2	1		
Food Processing	1			2
Clothing Stores	3		3	1
Clothing (Wholesale)	1			
Drug Store	1			
Insurance Companies	1			2
Home Furnishings	1		1	1
Union Representative	1			
Bank Managers	1			1
Publishing Company	1			
Paper Products	1			
Petroleum Marketing	2			
Airlines (Transportation)	2	1		
Aviation (Parts & Supplies)	1			
Government Service	1	1		

RECOMMENDATIONS: DISTRIBUTIVE CAREERS THROUGH COOPERATIVE EDUCATION

I. A California master plan for college work-study programs should be developed.

There is a definite need for development of a California master plan for Cooperative Education work-study programs at the junior college and higher education level. Areas of specific emphasis should include Distributive careers.

Master planning should be concerned with school-industry relationships, junior college, and other higher education work-study programs.

II. Promotion of alternate semester Cooperative Education-Distributive programs for junior colleges should be undertaken.

Evidence from this study and other studies shows that the alternate semester Cooperative program is a method of improving the educational curriculum for many students. Community involvement, reduced educational cost and improved employment possibilities result from this kind of program.

Although Eastern colleges have led the way in developing the Cooperative plan, it is evident that the philosophy of the California Junior College system is in accord with the Cooperative Educational design.

III. Development of financial support for college work-study Distributive programs

Financial support is the key to successful programs. Evidence has been presented to show that Cooperative Education is a plan which is acceptable to business and industry. Students do receive educational benefits not available in traditional college programs. Successful operation, however, depends upon adequate counseling, supervision, and work-station development.

IV. Development of "open-ended" terminal college Distributive programs should be promoted.

Evidence developed from work-study programs points to the need for new conceptual models for attainment of professional credentials. Intermediate terminal goals ought to be available. They should lead directly toward higher educational objectives.

Associate in Arts Distributive terminal programs should lead more directly to junior and senior year college Bachelor Degree programs with little loss of credit in transfer for those students who are capable of advanced programs. Cooperative work-study programs can provide new models of continuity.

V. A pilot project in Trade and Transportation Through Cooperative Education is needed.

A study of the employment patterns in the San Francisco Bay Area shows the need for taking another step in Distributive career educational development. This crossroads of world transportation industries is an ideal location to develop a program of work-study education in Trade and Transportation.

SUMMARY: A RESEARCH AND DEVELOPMENT PROJECT IN COMMUNITY COLLEGE COOPERATIVE EDUCATION WITH EMPHASIS ON TRANSPORTATION CAREERS

Mr. William Janssen, with the assistance of Mr. Lowell Mainland, and student assistant, Oscar Ciornei, and others, has completed a one-semester developmental effort in transportation careers for community college Cooperative Education students. Dr. Thomas George taught the career-related transportation class and Dr. Robert Bennett assisted in the Cooperative Education development.

The major focus of this project was to gain information about the transportation industries in the San Mateo County and San Francisco Bay Region so that Cooperative Education student placements could be accomplished.

It was decided to choose two industries--in this case the flower industry and the electronics industry--to follow the transportation process from beginning to end. Since these two industries represent divergent product areas it was assumed that various phases of agriculture, science, manufacturing, trucking, airlines and a wide variety of processes could be investigated by narrowing the study in this manner.

As a part of the project an effort was made to place students in Cooperative Education work stations that relate to the transportation industries. One of the factors to be considered is that almost all industries and businesses are closely tied to transportation for certain phases of their activities. A list of 59 students and their employers during spring semester is provided to show the range of opportunities available. All Cooperative Education students in this program work from 20 to 40 hours per week for the full semester to earn 3 units of credit. Five women students and fifty-four men students are included. The total number of work hours per student for the semester varied from 360 hours to 720 hours.

It should be pointed out that this program in Cooperative Education is part of the ongoing experimental program at College of San Mateo which involves a broad range of students in a program structured in a different way than has been traditional in California community colleges. Not all of these students were enrolled in the control class concurrently with the cooperative work station. All of the students have, however, spent extensive periods of time directly in business and industry in paid work experience learning situations. Each student earns three units of Cooperative Education credit for the supervised experience in the community.

PURPOSE AND SCOPE

The San Francisco Bay Area is recognized as one of the major crossroads of the world. This region serves as a terminal for Northern California and the entire United States for airline, rail, sea and auto freight and passenger transportation. There could be few locations better suited to an educational program in transportation studies.

Further, there is a need for demonstrating a community college program which provides career-related, direct, student involvement in transportation occupations. It is proposed that students alternating semesters between college classes and work stations in transportation occupations would gain this involvement in more intensive educational experiences.

COMPANIES OR ORGANIZATIONS CONTACTED

The major airlines operating out of the San Francisco International Airport were interviewed to find out what part they paly in air transportation, what their requirements are in the way of personnel in the air freight field, and qualifications required that might be related to students and their training. Since much of the air freight out of the San Francisco Airport goes through the hands of specialized air freight forwarders, a number of these--both large and small--were inter-

viewed with the same objective in mind as with the airlines themselves. The same procedure was followed with both the electronics and flower industries with personnel of representative companies in each of these fields being interviewed.

NUMBER OF CONTACTS MADE — A total number of 40 personal calls were divided in this manner:

Airlines	12
Airfreight Handlers	10
Electronic Manufacturers	5
Flower Growers and Wholesalers	7
Other related groups	6

In addition to the personal calls, library research was conducted using industry articles and other sources of data on these fields.

RESEARCH SUMMARY AND GENERAL CONCLUSIONS — Air cargo is gaining in importance both to the airlines and to many businesses. Air freight volume is becoming sizeable in proportion to passenger travel on both a mileage and revenue basis. Many businesses are finding air transportation an answer to their needs and problems to a degree unthought of even a few years ago. All records for domestic air freight volume were broken in 1968, with revenue-ton miles up 19.3% over 1967.

The type and volume of air cargo both carried by airlines and shipped by many different companies has been growing at a marked rate. There is every indication that this will continue at even an accelerated pace. New larger planes--many of them devoted solely to air freight--containerization, increased sophistication in company attitudes toward air freight, every day use of air freight now, as against previous "emergency use" all are contributing factors.

Airlines have made great investments in facilities of all kinds, looking toward an increased and profitable handling of air cargo. Facility improvements include automated terminals in many airports, sophisticated freight handling equipment and use of computers for speed and economy in

handling scheduling and paperwork which is important to air cargo transportation.

Need for qualified personnel, particularly at the mid-management level is matching the growth of shipments and airline investment.

The types of jobs available at freight forwarders are similar to those at the airlines themselves. People for both inside and outside selling are used in greater or smaller numbers by all of the companies. Rate clerks, teletypists, traffic managers, and supervisors are needed for a great amount of paperwork that is a part of pick-up, handling, and forwarding. It is clear that beginners in the field are limited to typists, teletype operators and expediters. It is also clear that opportunities are there for beginners to move up to rate clerks, analysts and supervisors in the operations field and to both inside and outside sales jobs.

Some of the student characteristics needed include ability to type (this seems to be a vital requirement); a knowledge of geography; a basic knowledge of traffic, traffic terms and background; a general business or marketing background; a good telephone technique (since so much of the business is done over the telephone); an ability to communicate with people, both verbally and in writing. All of these qualities are things that can be secured in part from training in school and many of the forwarders indicate a desire for places like the community college to provide help in training for the transportation field.

Jobs that are available or will be available in the industry as it grows cover a wide variety. These include:

Operations Function		Sales Function
Ramp Service	Inside:	Customer Service
Cargo Handlers		Clerical
Clerical (all types)		Trainee (all functions)
Freight agents	Outside:	Service Representative
Supervisors		Sales Representative
Operating Manager		Supervisors
		Sales Manager

Opportunities to advance are not necessarily confined to one area. Competent, trained personnel can move from one functional area to another.

Most of the people interviewed pointed out that a general background in marketing, coupled with good sense and an understanding of the mechanics of the business, is very essential. They also emphasized that experience in all facets of the business, including ramp and plane servicing, would be invaluable to management people.

This need for qualified personnel is heavily concentrated at the air carriers and related freight forwarding companies. Opportunities are growing also for experienced traffic people at manufacturing companies.

On-the-job training of both carriers and forwarders is vital now, in order to meet the need for management personnel in the rapidly expanding companies who have no ready source of supply.

Potential employees with some college training that encompasses both a general business and specialized transportation curriculum are becoming more and more desirable. This is at all levels of work and in all types of providers and users of air transportation.

College level instruction in special air freight traffic courses is considered important for inclusion in general curriculum offerings with extra emphasis desired on overall transportation and related courses.

Motivated, enthusiastic students with the traffic oriented curriculum, through Cooperative Education, can be a source of personnel for the airlines and related companies. There are apparent opportunities for both alternate semester and part-time work stations. Colleges will need to spend time in promoting this concept with the companies if students are to gain the maximum benefits.

ABSTRACT

TEACHER ASSISTANT PROGRAM AT COLLEGE OF SAN MATEO

An Associate in Arts Degree program with
Cooperative Education field experience.

This two-year operational project proposes to develop an educational program for the training of Teacher Assistants at College of San Mateo. Such a program will generate para-professionals specifically trained to work under the direct supervision of certificated elementary and secondary teachers, assisting them in the accomplishment of their professional duties and responsibilities.

The press of change in education demands the development of adequate support personnel for our professional teaching staff. Support personnel, adequately trained and readily available is essential to all professions today. Only in education is the key professional so grievously burdened with activities rightly performed by less highly trained personnel.

In the community, College of San Mateo has played a major role as the educational institution for training para-professionals. Now it can extend this service to provide much needed assistance to the teaching profession by offering a program for training Teaching Assistants at the elementary and secondary school levels, as well as for college readiness tutoring.

The training of the Teacher Assistant fits naturally in the Junior College structure. The proposed program has been designed with flexibility to allow College of San Mateo graduates to seek and find employment at many levels in the school system--from kindergarten through junior college. Candidates will range from young students recently graduated from high school to mature women and men with varying educational backgrounds.

The Associate in Arts Degree with a Major in Teacher Assisting will prepare the individual to serve as a para-professional member of the teaching team. Teacher Assistants work with the professional teacher in tutoring individuals or small groups of students, aiding in the preparation and presentation of audio-visual instruction, grading examinations, preparing bulletin board displays, maintaining attendance records, and performing a variety of tasks under the direction of professional staff members in the school system.

An essential feature of this emerging program is the Cooperative Education field experience. In cooperation with local school districts and our Cooperative Education Department, students spend an average of fifteen hours each week working with professional teachers in selected schools as paid Teacher Assistant trainees. A second plan allows students to work alternate semesters.

TEACHER ASSISTANT
(Para-professional)

The Associate in Arts Degree with a major in Teacher Assisting prepares the individual to serve as a para-professional member of the teaching team. Teacher Assistants work with the professional teacher in tutoring individuals or small groups of students, aiding in the preparation and presentation of audio-visual instruction, grading examinations, preparing bulletin board displays, maintaining attendance records, and performing a variety of tasks under the direction of professional staff members in the school system.

Many Teacher Assistants will continue on to an advanced college program to become professional teachers.

	Units
American History and Institutions: California Government	4 - 8
English	6 - 8
Health Education	2
*Physical Education for Teacher Assistant (emphasis on instruction for leading and supervising physical education activities)	2
ED-1 Introduction to Education	2
ED-2 Roles and Responsibilities of the Teacher Assistant	3
AV-61a Audio Visual Aids	1
Reading Techniques for Teacher Assistants	3
Math 16 Content of Elementary School Math	3
Art 8 Public School Art	3
Music 8 Fundamentals for the Classroom Teacher	3
Bus. 92a Typing (or proof of competence)	3
Speech 33 Voice and Articulation	3
Psy. 5, Child Development for the Teaching Assistant	3
Phys. Science 10, Introduction to Physical Science	3
Life Science 10, Introduction to Life Science	3
Electives	3 - 10
Cooperative Education Field Experience	3 - 9

Students may elect to earn field experience credit through volunteer or paid work experience in local school systems. Part-time and alternate semester work plans are available. Arrangements are made through faculty advisors.

NEW CAREERS THROUGH COOPERATIVE EDUCATION

PROVIDING HIGHER EDUCATIONAL OPPORTUNITIES FOR MINORITY GROUPS AT COLLEGE OF SAN MATEO, CANADA COLLEGE AND SKYLINE COLLEGE

Developmental contributors: Mr. George Mangis, Dr. Jack Atthowe, Dr. Doug Smith, Dr. Stan Goldstein, Mr. Eric Gattmann, Mr. Henry Anthony, Mr. Ben Thomas, Mr. Lee Mahood, Mr. Ted Gilman

GOAL OF PROGRAM: To raise the educational level of competent, employed minority group workers to the Associate in Arts degree through day and evening college programs.

RATIONALE: Large numbers of capable workers are presently employed at entrance level work stations with no hope of advancement because of the lack of educational credentials.

Providing increased opportunity for earning the Associate in Arts degree would open the door to advancement with their present employers, or transfer to other employers having greater need for technical personnel.

BACKGROUND: The Equal Employment Opportunities Committee of Veterans' Hospital in San Mateo County requested that College of San Mateo provide classes at the Menlo Park division of the hospital for this purpose. All classes are open to the public. Students consist of employed workers, minority group and others, in the inter-agency divisions of Veterans' Hospital, Geological Survey personnel, and NASA. The majority of people served live in East Palo Alto and East Menlo Park low-income areas.

Building 103 in Menlo Park, with excellent classroom facilities, has been provided for instructional purposes close to the low-income areas where employers live.

OPERATION: The basic design for this form of Cooperative plan is to provide college level instruction at a time and location where employed ethnic minority workers can participate.

The concept of New Careers Through Cooperative Education can be implemented without excess costs and within the framework of regular programs. The innovative features are the focus of the program on career objectives, the cooperative interaction of the work station with the instructional program, and the fact that classes can be provided at times and places convenient to the students involved.

NEW CAREERS THROUGH COOPERATIVE EDUCATION

College of San Mateo and Cañada College
in cooperation with Veteran's Hospital and other agencies
serving the Menlo Park-East Palo Alto communities

The Goal — Many capable full-time employees work at entrance-level assignments with little hope for advancement because of the lack of educational credentials.

This program aims to provide college level instruction at convenient times and places for employed workers to participate. Career-related, on-the-job work experience strengthens the educational process through practical application of classroom theory. The opportunity to earn credit toward intermediate certificates and the Associate in Arts degree opens the door to advancement with present employers or transfer to other jobs.

Areas of Emphasis — Business, medical assisting, and psychology-social work assisting are the three areas of specialization. Courses offered are the same as those available to all students through day and evening college.

Students have many options in choosing their course work. They are encouraged to enroll in courses offered on-campus in addition to those made available near their work assignment.

Individual and group counseling sessions will be available for students to assist them in choosing courses for major areas of study and to answer questions about progress in the program.

Certificates of Progress — Upon completion of 20 semester hours of college work, a Certificate of Progress, Level I, will be issued to students. Certificate of Progress, Level II, will be earned by completing 40 semester hours. These intermediate certificates are provided as milestones to indicate significant educational accomplishments by students seeking the Associate in Arts degree.

Cooperative Work — As students move along in the program, efforts will be made to provide a variety of work experiences to increase their technical skills. Twelve units of academic credit must be completed for each three units of cooperative work experience.

Fall Semester 1968 — Three courses will be offered during Fall Semester of 1968 in Building 103 of the Menlo Park Division of Veterans' Hospital.

Presliminary registration arrangements should be made through Mr. Terry Behan of the Palo Alto Division of Veterans' Hospital.

History 23 — The Afro-American in U. S. History (3 units) taught by Mr. Byron Skinner, instructor in Social Sciences at Cañada College.

Psychology 1 — General Psychology (3 units) taught by Dr. Doug Smith of Veterans' Hospital.

Anatomy 51 — Body Structure and Function (2 units) taught by Mr. James Stoney, instructor of Life Science at College of San Mateo.

NEW CAREERS THROUGH COOPERATIVE EDUCATION

Graduation Requirements at College of San Mateo and Cañada

Graduation from College of San Mateo or Cañada College with the Associate in Arts degree is based upon the completion of 60 units of lower-division college work, including the requirements listed below. A student is required to have an over-all grade average of "C" in the courses.

Requirements in brief:

Subjects	Units
American History and Institutions; California Government	4-8
English	6-8
Health Education and First Aid	2-3
Major (in a specified field)	20
General Education	6
Electives	12-20
TOTAL UNITS	60

History and Government

This requirement can be satisfied in two different ways: (a) by completing either Political Science 25--National, State, and Local Government (5 units) or, (b) by completing one of the listings in each of the following groups:

Group 1: American History and Institutions
- a. History 17A-17B - American History (6 units),
- b. Political Science 21 - American Institutions (3 units)
- c. Political Science 22 - American National Government (3 units)
- d. History 4A-4B - Western Civilization (6 units)
- e. History 99 - Historical Geography, and History 17A or 17B (6 units)
- f. History 33 - The Afro-American in U. S. History (3 units)

Group 2: California State and Local Government
- a. History 23B - California History (2 units)
- b. Political Science 23 - State and Local Government (1 unit)
- c. Political Science 12 - State and Local Government (3 units)
- d. History 22 - California History (3 units)

CONSULTANTS & ADVISORY GROUPS

Planning and development of this design has resulted from meetings with CSM business and technical department members, CSM advisory committees, business and industrial advisory groups, and representatives from other colleges.

California Junior College Association Conference, Committee for Relations with Organizations Other Than Schools, Dr. Norman E. Watson, Chairman, (Superintendent, Orange Coast Junior College District).

Dr. George Halverson, San Jose State College, Division Chairman, Business Management; Dean Wright, Chairman, Business Division; and Dean Gunderson, Chairman, Engineering.

Dr. John McClure, Vocational-Technical Division, School of Education, University of California, Berkeley.

Northern California Industry-Education Conference. Meetings with San Mateo County Industry-Education Council.

Mr. Van Wagenen, Bureau Chief, Mr. Aikin, and Mr. Wenstrom, California Department of Education, Business Division (Co-op Distributive Project).

San Mateo Union High School District, Art Department Chairmen (Technical Illustration) with Mr. DeHart.

Prof. Johansen, Chairman, and Prof. Wentura, San Francisco State College, Design and Industry Division.

Mr. Jack Johnson, Manager, and Mrs. Betty Rogers, Assistant Manager, and six employment counselors, California Department of Employment, San Mateo.

College of San Mateo Technical Illustration Advisory Committee.

Philco-Ford Symposium for Junior College Technical Instructors, Palo Alto.

College of San Mateo Business Division (Planning), Mr. Yeager, Mr. Janssen, Mrs. Davidson.

Mr. Don Robertson, Administrative Management Association and Southwest Publishing Company.

College of San Mateo Aviation Club (students).

College of San Mateo Veterans Club (students).

Electronics Advisory Committee (John Van Derslice and John Hecomovich, ten industry representatives).

Peninsula Drafting Managers Association (with Mr. Gum).

Welding Technology Advisory Committee.

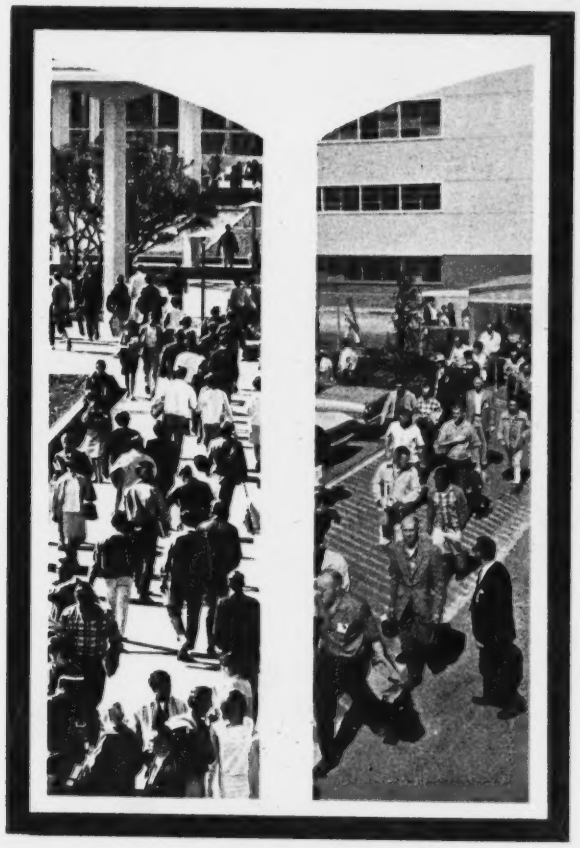
Drafting Technology Advisory Committee

Personnel Managers, United Air Lines; H. L. Kinkade, Production Staffing.

VISTA, Mr. Jeff Darman, Washington D. C. office. Mr. Sheldon Cole, Western Regional Director, San Francisco.

Veterans' Administration Hospital, Palo Alto and Menlo Park; William F. Lee, Acting Director, Terry Behan, Training Director, and 3 hospital department heads.
De Anza College, Dr. Nate Boortz and 8 instructors from the technical division.
National Commission for Cooperative Education (Houston conference).
Mr. T. L. Levin, Rundel Electric Company (Millbrae).
Mr. Jack Pehrson, Cal-West Electric (South San Francisco).
Student Seminar: Diablo Valley Junior College (Concord).
Mr. Don Allen, Merritt Junior College.
Report to Distributive Education Regional Conference (San Mateo).
Mr. Elwin Gregory and Mrs. Shirley Rosenberg, San Mateo Union High School District, Educational Assistant Cooperative plan.
Mr. Robert Ferm, Sky Stores, Inc., (Burlingame), Aviation Wholesale.
Pan American Airways, H. L. Thomas, Airport Manager; C. F. Gregg, Director of Public Affairs (with Mr. Nystrom).
Mills High School, Counseling for Seniors.
Mr. Russell Rahe, Personnel Manager, Standard Oil Company (Mr. Janssen).
Mr. Mangis, Mr. Gattmann, Mr. Mahood, Mr. Gilman, and Mr. Gum (Evening College).
Mr. Joseph Zuko, Defense Supply Agency, Burlingame.
Mr. Glen Keep, Regional Personnel Director, Woolworth's (Mr. Janssen).
Mr. Richard Kichline, National Seal Company (Redwood City).
Philco-Ford Corporation, Western Development Laboratories (Palo Alto). Mr. Dick Deffner, Mr. Bob Radcliff. With Mr. Owen of CSM Machine tool department.
Mr. Anthony Maniscalco, Development Editor, Science Research Associates.
San Francisco State College, Dr. Simpson and Dr. Moore, Deans of Elementary and Secondary Education (with Mr. Garlington).
Mr. Ennis McDaniel, San Mateo County Superintendent of Schools, Department of Human Relations (with Bob Howe and Bob Hoover).
Report to Northern California Industry-Education Council (San Francisco).
Mr. Claude McAlpin, Manager-Operations, General Electric Co. (Burlingame).
Report to Bay Area Council Electronics Employers at San Jose City College.
Report to San Mateo County Industry-Education Council (San Mateo).
Mr. C. D. Robinson, Division of Apprenticeship Standards.
Mrs. Jean Stephenson, Personnel Manager, Pacific Telephone Company.
Mr. Jim Bailey, Engineering Manager, Pacific Telephone Company
Mr. Bill Timms, Manager, and Mr. Ron Rose (Electronics Advisory Committee), IBM Company (Palo Alto).

Personnel managers and industrial representatives from more than 190 companies have expressed an interest in developing Cooperative programs.



COOPERATIVE EDUCATION

College of San Mateo • Cañada College • Skyline College

WHAT IS COOPERATIVE EDUCATION?

The Cooperative Education program provides students with off-campus educational work experience in a technical, business or professional setting.

Three plans provide regular work experience related to college studies and career goals of students.

ALTERNATE SEMESTER Two students hold one full-time work station on a year-around basis. During each semester one student is in school while the other works full time.

PARALLEL PLAN Students hold part-time, afternoon and evening, or swing shift jobs with appropriate college class loads.

EVENING COLLEGE NEW CAREERS Special arrangements are made for studies related to full-time employment and new career goals of students.

The Cooperative plan is now in use in more than 75 colleges throughout the United States.

Students may transfer to upper division colleges and universities on the same basis as in other programs of instruction.

Students gain a deeper understanding of the relationship between classroom theory and practical application.

Community involvement through direct experience adds a new dimension to the educational process.

College is more attractive to many students because of the combination of work and study.

Productive employment under realistic competitive conditions in a real-life, adult-dominated environment provides students with insights that enrich their educational experience.

Improved employment opportunities are available to graduates as a result of industrial internship experience.

Industry is provided a method for obtaining highly motivated, responsible employees on a regular full-time or part-time basis.

Experience shows that 50-75% of Co-op students remain with their employers after graduation.

Electronics student being trained with sophisticated technical equipment by supervisor on work station.

Business student broadens knowledge of communications working in Public Relations Department of electronics manufacturer.

Education student here is helping elementary students on school playground.

THE VALUE OF WORK EXPERIENCE

The purpose of the Cooperative program is to strengthen and enrich the education received by college students. It exposes students to situations that are educationally, socially, culturally and geographically different from life on the college campus or the life students have lived in previous situations. A result of the Cooperative Education experience is to broaden the student's understanding of the world in which he lives.

WHAT THE EXPERTS SAY

Dr. Ralph W. Tyler (Stanford University), Chairman of the National Commission for Cooperative Education: "Cooperative Education gives a student an education qualitatively superior in some respects to a conventional college education.
Cooperative students become more mature, and their records in graduate school and in employment show that Cooperative Education is first-rate college education."

Dean Roy L. Wooldridge (Northeastern University): "It is called 'Cooperative Education' because it is dependent upon the cooperation of employers and educators in combining to form a superior total educational program for the students."

NEW CAREERS THROUGH COOPERATIVE EDUCATION

Many capable full-time employees work at entrance level assignments with little hope for advancement because of the lack of educational credentials.

One phase of the Cooperative program called New Careers Through Cooperative Education aims to provide evening college instruction at convenient times and places for employed workers to participate. Career related on-the-job work experience strengthens the educational process through practical application of classroom theory. The opportunity to earn intermediate certificates and the Associate in Arts degree opens the door to advancement with present employers or transfer to other jobs. Credit for Cooperative field experience is included in the program.

SCHEDULING WORK STUDY PERIODS

Most Cooperative programs lead to the Associate in Arts degree in two and one-half years and the bachelor degree in five years.

The Co-op student moves through a regular program of academic instruction as other students, and in addition, gains educational growth and employment benefits of Cooperative work experience.

ALL STUDENTS ARE ELIGIBLE

Cooperative Education is broad in scope and the program is designed to serve all students who are interested and wish to participate.

Business and technical work assignments with electronics, communication and aero-space companies have resulted in rapid advancement for student employees. Many of these students continue their studies in schools such as San Jose State College or University of California, Berkeley.

New opportunities for study and field experience are available for students in Cooperative Education. Career experiences leading to management work in hotels and restaurants and department stores are available through the program, along with positions in the stock exchange and in banks and newspapers.

Liberal Arts students gain valuable off-campus learning experiences in career-related income-producing work stations as teacher assistants, library assistants, social work assistants and VISTA volunteers. Jobs with city and county governments allow students to attain vocational goals through combining college study with actual experience in public service agencies.

Students who may not have planned to attend college can benefit from the Cooperative program. Young employed workers in entrance-level technical and business jobs may enroll in college classes to take advantage of special training courses. Careers in petroleum marketing, small business management and technical supervision can result from interest gained through combining work and study.

Working for a public utilities firm this Co-op assistant engineer helps design and maintain cable facilities.

Engineering student puts academic training to work as a major appliance serviceman for large manufacturer.

BUSINESS, INDUSTRY PARTICIPATION

More and more firms and organizations have begun to take part in the Cooperative Education program at College of San Mateo, Canada College and Skyline College by employing students. Some participants are: Bank of America, Cal West Electric, General Electric, IBM, Lockheed Missiles & Space Co., Memorex, Micro-Miniature, Owens-Illinois, Pacific Coast Stock Exchange, Pacific Telephone, Palo Alto Times, Pan American Airways, J.C. Penney, Philco-Ford, Sears Roebuck, Shell Data Service Center, Southwestern Publishing, Standard Oil, City, County and Federal agencies, VISTA and many others.

Evening college student prepares work materials in Data Processing Center.